We claim:

1. A fluid distribution assembly comprising: 1) a flow field device embodying a flow field which comprises an active area comprising a) at least one channel having an inlet and an outlet, and b) at least one land area, and 2) a fluid transport layer disposed between said active area and a target area;

wherein, for at least one non-zero flow rate of a fluid into said inlet and at least one use rate of an active component of the fluid in the fluid transport layer, lateral flux of said active component varies by no more than 35% through at least 90% of all overland portions of said fluid transport layer.

2. The fluid distribution assembly according to claim 1 wherein lateral flux of said active component varies by no more than 25% through at least 90% of all overland portions of said fluid transport layer.

3. The fluid distribution assembly according to claim 1 wherein 70% or more of the active area of said flow field is land area

4. The fluid distribution assembly according to claim 3 wherein lateral flux of said active component varies by no more than 25% through at least 90% of all overland portions of said fluid transport layer.

5. The fluid distribution assembly according to claim 1 wherein said channel is a serpentine channel.

6. The fluid distribution assembly according to claim 5 wherein at least two sequential major segments of said serpentine channel are non-parallel.

7. The fluid distribution assembly according to claim 5, wherein at least three sequential major segments of said serpentine channel are non-parallel.

8. The fluid distribution assembly according to claim 5, wherein no more than 49% of the major segments of said serpentine channel are parallel.

9. The fluid distribution assembly according to claim 5, wherein no more than 25% of the major segments of said serpentine channel are parallel.

10. The fluid distribution assembly according to claim 1 wherein said channel comprises major segments separated by land areas, wherein the areal size of the land areas decreases monotonically with distance from the inlet as measured along said channel.

11. A flow field device embodying a flow field comprising at least one serpentine channel wherein at least two sequential major segments of said serpentine channel are non-parallel.

12. The flow field device according to claim 11, wherein at least three sequential major segments of said serpentine channel are non-parallel.

13. The flow field device according to claim 11, wherein no more than 49% of the major segments of said serpentine channel are parallel.

14. The flow field device according to claim 11, wherein no more than 25% of the major segments of said serpentine channel are parallel.

15. The fluid distribution assembly according to claim 11 wherein said channel comprises major segments separated by land areas, wherein the areal size of the land areas decreases monotonically with distance from the inlet as measured along said channel.

16. The flow field device according to claim 11 wherein said channel comprises multiple courses.

17. A fluid distribution assembly comprising: i) a flow field device according to claim 11, and ii) a fluid transport layer disposed between said active area and a target area.

18. A flow field device embodying a flow field comprising at least one channel and at least one land area,

wherein said land area separates a first major segment of said channel and a second major segment of said channel,

wherein for any first point on said first major segment there is a second point on said second major segment which is nearest to said first point, and

wherein the shortest distance between said first and second points increases monotonically with the distance between said first and second points measured as distance along said channel.

19. The fluid distribution assembly according to claim 18 wherein said channel is a serpentine channel.

20. The flow field device according to claim 19 wherein at least two sequential major segments of said serpentine channel form an angle of greater than 0 and less than 45 degrees.

21. The flow field device according to claim 19 wherein at least two sequential major segments of said serpentine channel form an angle of greater than 0 and less than 10 degrees.

22. The flow field device according to claim 19 wherein at least two sequential major segments of said serpentine channel form an angle of greater than 0.5 and less than 10 degrees.

23. The flow field device according to claim 19, wherein a first pair of sequential major segments of said serpentine channel form a first acute angle, wherein a second pair of sequential major segments of said serpentine channel form a second acute angle, and wherein said first acute angle is not equal to said second acute angle.

24. The flow field device according to claim 19 wherein said serpentine channel has an inlet, wherein a first pair of sequential major segments of said serpentine channel form a first acute angle, wherein a second pair of sequential major segments of said serpentine channel form a second acute angle, wherein said first pair of sequential major segments is closer to the inlet than said second pair of sequential major segments as measured in distance along said serpentine channel, and wherein said first acute angle is greater than said second acute angle.

25. The flow field device according to claim 19 wherein said serpentine channel has an inlet, wherein sequential major segments of said serpentine channel form acute angles, and wherein said acute angles decrease in distance from said inlet as measured in distance along said serpentine channel.

26. The flow field device according to claim 19 wherein said channel comprises multiple courses.

27. A fluid distribution assembly comprising: i) a flow field device according to claim 19, and ii) a fluid transport layer disposed between said active area and a target area.

28. A flow field device embodying a flow field comprising at least one channel comprising major segments which comprise analogous parts, wherein the distance between analogous parts of sequential major segments decreases monotonically with distance from the inlet as measured along said channel.

29. A flow field device embodying a flow field comprising at least one channel comprising major segments separated by land areas, wherein the areal size of the land areas decreases monotonically with distance from the inlet as measured along said channel.

30. The flow field device according to claim 11 which is porous.

31. The flow field device according to claim 11 which is non-porous.

32. The flow field device according to claim 11 which is electrically conductive.

33. A fuel cell comprising the fluid distribution assembly according to claim 1.